

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name: Children's Hospital of Wisconsin, Inc.

Address: 9000 W. Wisconsin Avenue

City: Milwaukee

State: WI: Wisconsin

Zip Code: 53201-1997

B. DUNS No. 073847261

II. Is the applicant currently receiving EPA Assistance? ☐ Yes ☒ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

None

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

None

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

None

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R. 5.140 and 7.95)

☒ Yes ☐ No

a. Do the methods of notice accommodate those with impaired vision or hearing?

☒ Yes ☐ No

b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?

☒ Yes ☐ No

c. Does the notice identify a designated civil rights coordinator?

☒ Yes ☐ No

VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a))

☒ Yes ☐ No

IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166)

☒ Yes ☐ No

- X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.**

N/A

- XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.**

N/A

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official

Kim m Dougherty

B. Title of Authorized Official

Accounting Manager

C. Date

03/24/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statutes and EPA regulations.

A. *Signature of Authorized EPA Official

B. Title of Authorized Official

C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.

Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.



EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name:	Prefix:	First Name:	Middle Name:
		Kim	
	Last Name:		Suffix:
	Dougherty		
Title:	Finance Manager		
Complete Address:			
Street1: 9000 W. Wisconsin Avenue			
Street2:			
City: Milwaukee			
State: WI: Wisconsin			
Zip / Postal Code: 53201-1997			
Country: USA: UNITED STATES			
Phone Number: 414-266-6251		Fax Number:	
E-mail Address: kdougherty@chw.org			

Payee: *Individual authorized to accept payments.*

Name:	Prefix:	First Name:	Middle Name:
		Kim	
	Last Name:		Suffix:
	Dougherty		
Title:	Finance Manager		
Complete Address:			
Street1: 9000 W. Wisconsin Avenue			
Street2:			
City: Milwaukee			
State: WI: Wisconsin			
Zip / Postal Code: 53201-1997			
Country: USA: UNITED STATES			
Phone Number: 414-266-6251		Fax Number:	
E-mail Address: Kdougherty@chw.org			

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name:	Prefix:	First Name:	Middle Name:
		Kim	
	Last Name:		Suffix:
	Dougherty		
Title:	Finance Manager		
Complete Address:			
Street1: 9000 W. Wisconsin Avenue			
Street2:			
City: Milwaukee			
State: WI: Wisconsin			
Zip / Postal Code: 53201-1997			
Country: USA: UNITED STATES			
Phone Number: 414-266-6251		Fax Number:	
E-mail Address: Kdougherty@chw.org			

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: Prefix: **First Name:** **Middle Name:**

Last Name: **Suffix:**

Title:

Complete Address:

Street1:

Street2:

City:

State:

Zip / Postal Code:

Country:

Phone Number:

Fax Number:

E-mail Address:

Other Attachment File(s)

* Mandatory Other Attachment Filename:

Add Mandatory Other Attachment

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To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment

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BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Breathe S.M.A.R.T. (Safely Monitoring Air 'Round Town)	66.034	\$	\$	\$ 500,000.00	\$	\$ 500,000.00
2.						
3.						
4.						
5. Totals		\$	\$	\$ 500,000.00	\$	\$ 500,000.00

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
	Breathe S.M.A.R.T. (Safely Monitoring Air 'Round Town)				
a. Personnel	\$ 252,343.00	\$	\$	\$	\$ 252,343.00
b. Fringe Benefits	91,274.00				91,274.00
c. Travel	4,563.00				4,563.00
d. Equipment	0.00				0.00
e. Supplies	36,820.00				36,820.00
f. Contractual	30,000.00				30,000.00
g. Construction	0.00				0.00
h. Other	85,000.00				85,000.00
i. Total Direct Charges (sum of 6a-6h)	500,000.00				\$ 500,000.00
j. Indirect Charges	0.00				\$ 0.00
k. TOTALS (sum of 6i and 6j)	\$ 500,000.00	\$	\$	\$	\$ 500,000.00
7. Program Income	\$ 0.00	\$	\$	\$	\$ 0.00

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SECTION C - NON-FEDERAL RESOURCES				
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. Breathe S.M.A.R.T. (Safely Monitoring Air 'Round Town)	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
9.				
10.				
11.				
12. TOTAL (sum of lines 8-11)	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

SECTION D - FORECASTED CASH NEEDS				
Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal \$ 191,376.00	\$ 47,844.00	\$ 47,844.00	\$ 47,844.00	\$ 47,844.00
14. Non-Federal \$				
15. TOTAL (sum of lines 13 and 14) \$ 191,376.00	\$ 47,844.00	\$ 47,844.00	\$ 47,844.00	\$ 47,844.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT				
(a) Grant Program	FUTURE FUNDING PERIODS (YEARS)			
	(b)First	(c) Second	(d) Third	(e) Fourth
16. Breathe S.M.A.R.T. (Safely Monitoring Air 'Round Town)	\$ 152,954.00	\$ 155,670.00	\$	\$
17.				
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	\$ 152,954.00	\$ 155,670.00	\$	\$

SECTION F - OTHER BUDGET INFORMATION	
21. Direct Charges: \$500,000	22. Indirect Charges: No Indirect costs included.
23. Remarks: No Indirect costs included all direct program costs.	

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Application for Federal Assistance SF-424

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

03/24/2022

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Children's Hospital of Wisconsin, Inc.

* b. Employer/Taxpayer Identification Number (EIN/TIN):

39-0812532

* c. Organizational DUNS:

0738472610000

d. Address:

* Street1:

6737 W. Washington Street, Suite 1111

Street2:

* City:

West Allis

County/Parish:

* State:

WI: Wisconsin

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

53214-5648

e. Organizational Unit:

Department Name:

Children's Health Alliance

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

* First Name:

Kim

Middle Name:

* Last Name:

Dougherty

Suffix:

Title:

Accounting Manager

Organizational Affiliation:

Children's Hospital of Wisconsin, Inc.

* Telephone Number:

414-266-6251

Fax Number:

* Email:

kdougherty@chw.org

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities
Relating to the Clean Air Act

* 12. Funding Opportunity Number:

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

Breathe S.M.A.R.T. (Safely Monitoring Air 'Round Town)

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:*** a. Applicant * b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):**

* a. Federal	<input type="text" value="500,000.00"/>
* b. Applicant	<input type="text" value="0.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="500,000.00"/>

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title: * Telephone Number: Fax Number: * Email: * Signature of Authorized Representative: * Date Signed:

Project Narrative File(s)

* **Mandatory Project Narrative File Filename:** 1234-Breathe S M A R T Project Narrative Final 3.23.2

Add Mandatory Project Narrative File

Delete Mandatory Project Narrative File

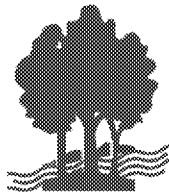
View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File

Delete Optional Project Narrative File

View Optional Project Narrative File



ENVIRONMENTAL LAW & POLICY CENTER

Protecting the Midwest's Environment and Natural Heritage

March 10, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Re: Children's Health Alliance of Wisconsin application for the U.S Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

Dear Ms. Hoium,

I write to express The Environmental Law & Policy Center's support of the work proposed by Children's Health Alliance of Wisconsin in its application for the U.S Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

ELPC is the Midwest's foremost public interest environmental legal advocacy and eco-business innovation organization. We develop and lead successful strategic advocacy campaigns to improve environmental quality and protect our natural resources. ELPC has long been concerned by air pollution and the related public health impacts, which are disproportionately experienced by residents across the Midwest. We've been advocating for clean air solutions in numerous ways: commenting on EPA rulemakings, challenging rollbacks of clean air protections, intervening to defend rules challenged by industry groups, and partnering with on the ground grassroots organizations to provide communities with the tools they need to collect and understand localized air quality data. For example, in Chicago we established and run a program now in its 7th year, working with community residents, including children as young as 6, to monitor PM2.5 levels, which can be seen at AirQualityChicago.org. This dashboard, made in collaboration with our community partners who've participated in our mobile air quality monitoring program, allows residents to access, visualize, and download PM2.5 datasets. This tool empowers communities to tell stories about their air pollution exposure and advocate for clean air solutions.

Our work is in line with Children's Health Alliance of Wisconsin's goals of addressing and improving air quality in Milwaukee through the collection and compilation of data, through community education and physical interventions.

The Environmental Law & Policy Center looks forward to supporting the proposed activities involved in this important work toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Thank you in advance for your consideration of the Children's Health Alliance of Wisconsin's application for the U.S. Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

Sincerely,

Susan Mudd
Senior Policy Advocate
Environmental Law & Policy Center

Tiffany Werner
Community Science Organizer
Environmental Law & Policy Center



knowledge changing life

Division of Epidemiology & Social Sciences
Institute for Health & Equity

March 7, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Dear Ms. Hoium,

I am writing this letter to express my support for the work proposed by Children's Health Alliance of Wisconsin in the application for the U.S Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities grant.

My work on children's environmental health focuses on encouraging outdoor time in natural spaces, including on schoolyards, among children to improve their health and well-being. Unfortunately, disparities in air quality and associated health problems such as asthma are problematic in Milwaukee, impacting the benefits of outdoor play. We have worked to understand air quality patterns on schoolyards, but little data exists to understand community wide patterns of air quality. This information is critical to understanding children's environments and making sound health and environmental policy to support Milwaukee children's health.

I look forward to supporting the proposed activities involved in this important work toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Sincerely,

Kirsten M. M. Beyer, PhD, MPH, MS
Associate Professor, Epidemiology & Social Sciences
Director, PhD Program Public & Community Health
Institute for Health & Equity
Co-Director, Geospatial Epidemiology & Outcomes (GEO) Core
MCW Cancer Center
Co-Director, Global Health Pathway
Medical College of Wisconsin

8701 Watertown Plank Road
Milwaukee, Wisconsin 53226-0509
www.mcw.edu

ED_013931A_00000273-00001

February 28, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Dear Ms. Hoium,

I am writing this letter to express my support of the work proposed by Children's Health Alliance of Wisconsin in the application for the U.S Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities grant.

I am an associate professor and director of the Bachelor of Science in Public Health program in the School of Pharmacy, Department of Pharmaceutical and Administrative Sciences, Concordia University. I have a PhD in the Public Health Sciences with a concentration in health policy and analysis. For over 20 years, I have been actively engaged in interdisciplinary epidemiologic research that examines how inequities in the social conditions in which people live (social determinants of health) contribute to disparities in health behaviors, and how large-scale policy and environmental interventions are effective at reducing these disparities.

I specialize in research with underserved communities using innovative strategies, incorporating social cohesion, ameliorating social inequities, and improving the quality of neighborhood environments. In addition, I have been a leader in developing techniques and applications to quantitatively measure physical and social environmental factors contributing to health behaviors and chronic disease outcomes. I have been funded by NIH, FDA, CDC, HRSA, and private foundations as a PI or co-I for over two decades, have over 70 peer-reviewed journal articles, and have presented in numerous international and domestic forums on the intersection of health disparities, the built environment, and chronic disease outcomes. I am excited about your proposal, which is directly aligned with my research, and I believe that the proposed project has the potential to be particularly impactful.

I look forward to supporting the proposed activities involved in this important work toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Sincerely,



Sandy Slater, PhD, MS
Director, Bachelor of Science in Public Health Program
Associate Professor, School of Pharmacy
Concordia University



March 4th, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Dear Ms. Hoium,

I am writing in strong support and commitment to partner on the work proposed by Children's Health Alliance of Wisconsin in the application for the U.S Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

As the Community Health Clinical Services Manager for Children's Wisconsin, I am pleased to support this grant application.

- Children's Wisconsin Community Health Asthma Management Program, also known as CHAMP provides in-home asthma self-management education and a home environmental assessments of potential asthma triggers to individuals with poorly controlled asthma who reside in Milwaukee County. The primary goals of this program are to reduce missed school or workdays, urgent care visits, emergency department visits, and hospitalizations due to asthma related illness or complications.
- Children's Wisconsin mission is CARE (caregiving, advocacy, research and education). The CHAMP program aligns with that mission by providing individualized education on asthma self-management to patients and families which is based on the most up to date research, evidence and guideline centered care. The program manager acts as a patient advocate in partnership with care providers to support the asthma management plan of care, which is developed in collaboration with patients and families to best meet their goals and objectives.
- The CHAMP program will align and contribute to this grant's scope of work by reinforcing or providing additional educational information during the home visit on how to access real-time air quality information through media outlets, internet, and smartphone applications. This will also include how poor air quality may contribute to asthma exacerbations and what steps or precautions are recommended to keep patients and families safe during the various levels of concerning air quality levels.

Children's Wisconsin looks forward to supporting the proposed activities involved in this important initiative that will empower community members with data and information on ways they can protect their health when outdoor air quality is unsafe. These important neighborhood-based initiatives will help us work together to reduce health disparities and create healthy communities for all children and families in Milwaukee.

Sincerely,
Nicholas Herrick
Community Health Clinical Services Manager
Children's Wisconsin

Children's complies with Federal civil rights laws. We do not discriminate based on race, color, national origin, age, disability or sex. Si no habla inglés, se programarán servicios de idiomas en forma gratuita. Llame al (414) 266-7848 (TTY: 414-266-2485). Yeg has tias kwi tsis bawj has kus Askis. pob yuav teem si harem muab kev pob txhais kus pob dawb mu koj. Hu rau (414) 266-7848 (TTY: 414-266-2485).

Kids deserve the **best.**

ED_013931A_00000275-00001



**MILWAUKEE
PUBLIC SCHOOLS**

Office of Academics
Department of Specialized Services
6620 W. Capitol Dr.

January 25, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Dear Ms. Hoium,

I am writing in strong support and commitment to partner on the work proposed by Children's Health Alliance of Wisconsin in the application for the U.S Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

As the Student Health Services Supervisor for Milwaukee Public Schools (MPS), I am pleased to support this grant application. MPS is committed to accelerating student achievement, cultivating leadership and building stronger, more positive relationships between the city's youth and adults who can showcase the path to success. This proposed project aligns with MPS's priorities in the following ways: 1) The academic achievement of students with chronic lung conditions like asthma will improve with projects like this that focus on removing environmental triggers. Reducing school absences for asthma exacerbations is key to student achievement. 2) This project creates a culture of health, well-being, and environmental awareness within the school. 3) This project strengthens partnerships and collaboration between MPS, local organizations, and the community.

MPS will partner with Children's Health Alliance of Wisconsin to identify locations to install outdoor air quality sensors, aid in the installation and maintenance of the sensors, and provide education to students and their families about how to access the data, what it means, and how they can keep themselves and their families safe and healthy during poor air quality events. This project would grow on our existing partnership, as we already collaborate with Children's Health Alliance on other asthma initiatives like the school walkthrough program and Southeast Wisconsin School-based Asthma Management Program (SAMPRO™).

MPS looks forward to supporting the proposed activities involved in this important initiative that will empower community members with data and information on ways they can protect their health when outdoor air quality is unsafe. These important neighborhood-based initiatives will help us work together to reduce health disparities and create healthy communities for all children and families in Milwaukee.

Sincerely,

Linda Williams
Student Health Services Supervisor
Milwaukee Public Schools

Jennifer Mims-Howell
Chief Academic Officer
Milwaukee Public Schools

Start. Stay. Succeed.
Comienza. Quédate. Triunfa.

March 4, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Dear Ms. Hoium,

I am writing this letter to express City of Milwaukee Health Department's support of the work proposed by Children's Health Alliance of Wisconsin in the application for the U.S Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

The mission of the City of Milwaukee Health Department is to advance the health and equity of Milwaukeeans through science, innovation, and leadership. By installing neighborhood-level air quality monitoring stations, training schools and community members how to understand and respond to poor Air Quality Index (AQI), Children's Health Alliance of Wisconsin's community air monitoring project will give Milwaukeeans a valuable tool for keeping their families and community safe, especially those with asthma and other respiratory illnesses.

The City of Milwaukee Health Department looks forward to supporting the proposed activities involved in this important work toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Sincerely,



Kirsten Johnson, MPH, CPH, CHES
Commissioner of Health

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



March 1, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

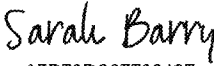
Dear Ms. Hoium,

I am writing this letter to express Wisconsin Department of Natural Resources' (DNR) support of the work **proposed by Children's Health Alliance of Wisconsin in the application for the U.S Environmental Protection Agency's Enhanced Air Quality Monitoring for Communities** grant.

Studies have found that U.S. minority populations are disproportionality exposed to air pollution regardless of income. Increased exposure to fine particulate matter (PM_{2.5}) is linked to heart disease and lung conditions such as asthma. Hyper-localized air monitoring in Milwaukee for particulate matter and the associated outreach outlined **in the Children's Health Alliance's** proposal will aid the DNR and other partner community organizations in understanding how air quality impacts minority populations and will continue to connect the science with the community through hands-on use of air monitoring equipment.

The DNR air program has a long history of leading emergent contaminant research, and as such is uniquely qualified to provide guidance to facilitate Wisconsin air quality monitoring at a community scale. The project will engage DNR regulators and local communities in responding to concerns about air quality and public health. The project will also provide air quality education to community members with a goal of understanding the impacts on local neighborhoods. The DNR commits to supporting the proposed activities involved in this important work through providing subject matter expertise and guidance on air quality sensors. This work will advance Wisconsin's goals toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Sincerely,

DocuSigned by:

A7D70DC3770642F... 3/1/2022 | 2:32 PM CST

Sarah Barry
Deputy Secretary
Wisconsin Department of Natural Resources

Tony Evers
Governor



Karen E. Timberlake
Secretary

State of Wisconsin
Department of Health Services

DIVISION OF PUBLIC HEALTH

1 WEST WILSON STREET
PO BOX 2659
MADISON WI 53701-2659

Telephone: 608-266-1251
Fax: 608-267-2832
TTY: 711 or 800-947-3529

March 21, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Dear Ms. Hoium,

As the Director of the Bureau of Environmental and Occupational Health at the Wisconsin Department of Health Services, I am writing to express our strong support and commitment to partner on the work proposed by Children's Health Alliance of Wisconsin (Alliance) under the EPA funding opportunity *Enhanced Air Quality Monitoring for Communities (EPA-OAR-OAQPS-22-01)*.

The Wisconsin Climate and Health Program and the Wisconsin Asthma Program are excited to continue collaborative work with the Children's Health Alliance of Wisconsin (Alliance). We appreciate your current support in leading the Wisconsin Asthma Coalition and the Wisconsin Asthma Plan; the School Walkthrough Program; and your work to encourage coordinated asthma care between schools, providers, and caregivers through SAMPRO™. We also value your efforts to improve childhood asthma management through partnership-building, education and trainings, and stakeholder outreach and engagement.

We are excited by several proposed activities under this new grant, in which four programs in the Bureau of Environmental and Occupational Health (BEOH) will collaborate with the Alliance to assess PM2.5 concentrations in underserved neighborhoods with high asthma burden in the city of Milwaukee. We know that the two regulatory air monitors in Milwaukee, along with some mobile monitoring, only tell part of the PM2.5 story in Milwaukee. Data from EPA's EJScreen show vulnerable populations in several of Milwaukee's historically disenfranchised and marginalized neighborhoods experiencing a disproportionate exposure to elevated levels of fine particle pollution that impacts lung and heart health and quality of life.

First, the Asthma Program and the Climate and Health Program will actively work with the Alliance, Milwaukee Public Schools, and other local partners to support the creation of a network of neighborhood air monitors to assess and map PM2.5 air quality data trends, assist in community education and school engagement activities, and evaluate performance measures and outcomes. Second, the Wisconsin Environmental Public Health Tracking Program plans to explore the addition of neighborhood-level data from air monitors in the air quality section of the Tracking data portal. We will also explore adding data to the Wisconsin Environmental Equity Tool (similar to EPA's EJScreen) portal once it's completed. Third, the Site Evaluation Program will assist with air quality sensor siting and calibration, as well as air monitoring quality assurance project plans and activities.

The state of Wisconsin is committed to advancing health equity and environmental and climate justice across our state. We look forward to supporting the proposed activities involved in this important initiative to empower community members with data and information on ways they can protect their health when outdoor air conditions are unsafe. These important neighborhood-based initiatives will help us work together to reduce health disparities and create healthy communities for all children and families in Milwaukee.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Mark A. Werner', written in a cursive style.

Mark A. Werner, Ph.D
Director, Bureau of Environmental and Occupational Health



2/21/22

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Dear Ms. Hoium,

I am writing this letter to express the Wisconsin Asthma Coalition's support of the work proposed by Children's Health Alliance of Wisconsin in the application for the U.S Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

The Wisconsin Asthma Coalition (WAC) is a diverse group, comprised of more than 180 members spanning various professions statewide. In Wisconsin, the burden of asthma is not equally shared, with certain ethnic minority groups, age groups and geographic regions disproportionately affected. The legacy of historic racism from redlining and restrictive zoning, environmental injustices and within health care systems have led to low-income communities and communities of color bearing a disproportionate burden from asthma. The WAC's mission is to foster partnerships to improve asthma management, enhance quality of life, reduce disparities and prevent asthma-related deaths. It is critical to ensure all people with asthma have equal access to guideline-based medical management, pharmacotherapy and healthy living environments free of irritants like air pollution that can trigger asthma attacks.

The Wisconsin Asthma Coalition looks forward to supporting the proposed activities involved in this important work toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Sincerely,

Nicholas Antos, M.D.
Pediatric Pulmonology
Advisory Committee Member, Wisconsin Asthma Coalition
Medical Director, SE Wisconsin School Based Asthma Management Program

Internal Revenue Service

District
Director

Department of the Treasury

EO: 201: 22-2

PO Box 43240

Chicago, Ill. 60690

Person to Contact: TPA

Telephone Number: (312) 886 1278

Refer Reply to: 87-375

Date: March 16, 1987

RE: *Childrens Hospital of Wisconsin, Inc.**
EIN: *39-0812532*

This is in response to the letter dated October 8, 1986 regarding your status as an organization exempt from Federal income tax.

Our records indicate that a ruling letter was issued in December 1979, granting your organization an exemption from Federal income tax under the provisions of Section 501(c)(3) of the Internal Revenue Code of 1954. Our records also indicate that your organization is not a private foundation but one that is described in IRC 509(a)(1) and 170(b)(1)(A)(iii)

Contributions made to you are deductible by donors in computing their taxable income in the manner and to the extent provided in Section 170 of the Internal Revenue Code.

If your gross receipts each year are normally \$25,000.00 or more, you are required to file Form 990, Return of Organizations Exempt from Income Tax by the fifteenth day of the fifth month after the end of your annual accounting period.

You are not required to file Federal income tax returns unless you are subject to the tax on unrelated business income under Section 511 of the Code. If you are subject to this tax, you must file an income tax return on F-990-T.

If any question arises with respect to your status for Federal income tax purposes, you may use this letter as evidence of your exemption.

This is an advisory letter.

Sincerely yours,

J. R. Starkey
J. R. Starkey
District Director

* Former Name: *Milwaukee Childrens Hospital*

Project Title: Breathe S.M.A.R.T. (Safely Monitoring Air 'Round Town)

Applicant Organization: Children's Hospital of Wisconsin, Inc. (Children's Health Alliance of Wisconsin)

Address: 6737 W. Washington Street, Suite 1111, West Allis, WI 53214

Primary Contact: Carissa Hoium, Phone: 414-337-4569, Email: [[HYPERLINK "mailto:choium@chw.org"](mailto:choium@chw.org)]

DUNS number: 073847261

Set-Aside: Community-based organization set-aside

Children's Health Alliance of Wisconsin (the Alliance) is housed within Children's Hospital of Wisconsin, Inc. (Children's Wisconsin). Children's Wisconsin is an independent, not-for-profit health care system dedicated solely to the health and well-being of children. Within Children's Wisconsin, there are several entities that encompass a wide array of programs and services through two hospitals, primary, urgent, emergency and specialty care clinics, a research institute, and Children's Service Society of Wisconsin, the largest not-for-profit, non-sectarian provider of community-based child and family services and child welfare services in Wisconsin. While our services reach across the state, the Milwaukee area is home to the main hospital and administrative offices. As the largest city in Wisconsin, Milwaukee is vibrant and culturally diverse; unfortunately, it also remains one of the most racially segregated cities in the country and faces challenges that can impact well-being, including poverty, housing instability and violent crime.

Applicant Organization Information: Our mission at the Alliance is to ensure Wisconsin children are healthy, safe and able to thrive. As Wisconsin's voice for children's health, we are an advocate for families and a catalyst for creating healthier communities. The Alliance carries out our mission through six initiatives focusing on different aspects of children's health: Asthma/Environmental Health, Emergency Care, Grief and Bereavement, Injury Prevention and Death Review, Medical Home and Oral Health.

Partners: The Wisconsin Department of Health Services (DHS) Division of Public Health, Bureau of Environmental and Occupational Health will serve as the primary partner on this project. Erika Kluetmeier, who works with both the Climate and Health Program and Asthma Program at DHS, will serve as the key partner contact. Other project partners include Milwaukee Public Schools, Wisconsin Department of Natural Resources, Children's Wisconsin Community Health Asthma Management Program, Sixteenth Street Community Health Centers, Urban Ecology Center, and the Environmental Law and Policy Center.

Project Location: The city of Milwaukee, Wisconsin

Air Pollutant Scope: Particle Pollution (PM2.5)

Budget:

EPA Funding Requested	Total Project Cost
\$500,000	\$500,000

Project Period: November 2022 – November 2025

Short Project Description: This project aims to create a community-based network of neighborhood-level air quality monitoring stations in Milwaukee, Wisconsin, focusing on neighborhoods with high asthma burdens. The community will receive education about how to access the neighborhood-level air quality data, what the data means, and the action steps tied to that data so that residents have both the tools and knowledge necessary to respond to asthma-related air quality risk factors.

Workplan

Section 1 – Project Summary and Approach

A. Overall project:

To address asthma disparities in Milwaukee neighborhoods with the highest asthma burdens, Children's Health Alliance of Wisconsin (the Alliance) and several state and local partners will create a community-based network of neighborhood-level air quality monitoring stations so that residents have the knowledge and tools necessary to respond to asthma-related air quality risk factors. This will be accomplished through six activities.

Activity 1: We will install fixed PurpleAir sensors and use portable AirBeam sensors at select schools in the Milwaukee Public Schools district, targeting schools located in Milwaukee neighborhoods with the highest asthma burdens. We will use census-tract data from Wisconsin Department of Health Services to identify neighborhoods of greatest need. We will leverage our existing partnership with Milwaukee Public Schools and use a school-based model for this project, knowing that the schools also serve as hubs of the communities around them.

Activity 2: We will train school partners to analyze the sensors' data, set up notifications, and develop school-based action plans to respond to air quality alerts.

Activity 3: We will collaborate with our school and community partners to develop and deliver educational programming for kids, families and communities. This education would be focused on accessing real-time air quality data and providing the community options regarding ways to keep themselves and their families safe and healthy during poor air quality events. The education may be delivered using a variety of methods; for example, through in-person meetings, e-newsletters, fact sheets and social media messaging.

Activity 4: We will engage schools in air quality monitoring activities through involvement in air quality campaigns (like anti-idling), student engagement and leadership, school STEAM curriculum/citizen science monitoring using sensors, and education and awareness programs aimed at students, families and the community. The portable AirBeam sensors are key to engaging students and building a knowledge base among the kids. This builds excitement and increases buy-in that can spill into the community from the schools. The activities serve to reinforce the education and awareness about air quality, what affects air quality and the importance of monitoring.

Activity 5: We will share real-time air quality data (e.g., PM2.5 measurements, Air Quality Index (AQI) scale for PM2.5) through apps and websites, along with long-term data and trends through the Wisconsin Environmental Equity Tool map, Wisconsin Environmental Public Health Tracking portal and other open portals and databases.

Activity 6: We will evaluate the effectiveness of air monitoring, education, and behavior changes that can improve asthma management using our performance measures. We will share our progress reports and our final report with both EPA and all partners involved in this project to ensure mutual learning and growth.

B. Project Significance:

According to the Asthma and Allergy Foundation of America 2021 Asthma Capitals™ report, Milwaukee ranks fourth among the 100 largest cities in the U.S. that are most challenging to live with asthma. The rankings are determined by factors contributing to asthma rates, including risk factors such as poverty, lack of insurance, air pollution, pollen count, long-term and quick-relief medicine use, tobacco laws and access to asthma specialists. This project aims to address some of these challenges by providing Milwaukee residents both the tools and knowledge necessary to respond to asthma-related air quality risk factors.

Milwaukee County is in nonattainment of national ambient air quality standards for ozone and currently has only three regional air quality monitoring stations, none of which are located in areas with high asthma burden. Asthma is the most common chronic disease of childhood leading to frequent hospitalizations and emergency department (ED) visits. Uncontrolled asthma sends one in five children with asthma to the ED each year with increasing cost of care. The lack of real-time, neighborhood-level air quality information poses a health risk for people with asthma. Numerous studies have confirmed the significant impact that air pollution has on asthma prevalence and severity. Spikes in poor neighborhood air quality can be caused by traffic-related air pollution as well as combustibles such as fireworks, outdoor grills and fire pits.

Rising temperatures and changing climatic conditions in Wisconsin are expected to create conditions favorable for the creation of air pollutants and seasonal increases in pollen that impair air quality and adversely affect health. Climate change creates conditions, including heat and stagnant air, which increases the risk of unhealthy ozone levels forming. High ozone levels affect people with lung diseases, children, older adults,

persons who work outdoors, and other at-risk populations by causing immediate breathing problems, cardiovascular harm, and premature death. Hotter temperatures and lack of rainfall increase the risk of drought, dust storms and wildfires, all of which create particle pollution. Larger particles can irritate eyes, noses and throats, and fine particles can get deep into parts of people's lungs or even in the bloodstream, causing trouble breathing, lung cancer, low birth weight, heart problems and premature death. People with heart or lung diseases, children, and older adults are the most likely to be affected by particle pollution exposure.

Section 2 – Community Involvement

A. Community Partnerships

The Alliance is honored to partner with a robust number of state and local organizations that bring their passion and expertise to this project. These partners include, but are not limited to, Wisconsin Department of Health Services (DHS), Milwaukee Public Schools, Wisconsin Department of Natural Resources, Children's Wisconsin's Community Health Asthma Management Program, Sixteenth Street Community Health Centers, Urban Ecology Center and the Environmental Law and Policy Center. As partners, all organizations will be invited to actively participate in regular partner meetings and will receive progress reports on the work being done under this project. The collaborative approach to this project will make future air quality monitoring work sustainable in both the city of Milwaukee and across the state of Wisconsin.

Wisconsin Department of Health Services (DHS): The partnership with DHS involves four statewide programs: Asthma Program, Climate and Health Program, Environmental Public Health Tracking Program and Site Evaluation Program. DHS plays the role of the key partner in this project, and will be involved throughout the planning, implementation and evaluation phases. DHS is committed to protecting and promoting the health and safety of the people of Wisconsin, making sure everyone can live their best life. The work of this project aligns with DHS as a whole along with all four of the programs involved. The expertise of the DHS staff in each of these programs paired with their in-kind contributions (e.g. evaluation and quality control services) make DHS incredibly valuable to this project.

Milwaukee Public Schools (MPS): MPS will partner with the Alliance to identify locations to install outdoor air quality sensors, aid in the installation and maintenance of the sensors, and provide education to students and their families about how to access the data, what it means, and how they can keep themselves and their families safe and healthy during poor air quality events. This proposed project aligns with MPS's priorities in the following ways: it focuses on improving the academic achievement of students with chronic lung conditions like asthma through reducing school absences, it creates a culture of health, well-being, and environmental awareness within the school, and it strengthens partnerships and collaboration between MPS, local organizations and the community. Additionally, this project would grow on our existing partnership, as MPS already collaborates with the Alliance on other asthma initiatives like the school walkthrough program and Southeast Wisconsin School-based Asthma Management Program (SAMPRO™).

Wisconsin Department of Natural Resources (DNR): The DNR air program has a long history of leading emergent contaminant research, and as such is uniquely qualified to provide guidance to facilitate Wisconsin air quality monitoring at a community scale. The project will engage DNR regulators and local communities in responding to concerns about air quality and public health. The project will also provide air quality education to community members with a goal of understanding the impacts on local neighborhoods. The DNR commits to supporting the proposed activities involved in this important work through providing subject matter expertise and guidance on air quality sensors. This work advances Wisconsin's goals toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Children's Wisconsin's Community Health Asthma Management Program (CHAMP): CHAMP provides in-home asthma self-management education and a home environmental assessment of potential asthma triggers by a trained asthma educator at no cost to persons with poorly controlled asthma residing in Milwaukee County. CHAMP would assist by incorporating air quality education into the current asthma education provided. This aligns with CHAMP's goal to reduce missed school or work days, urgent care visits, emergency department visits and hospitalizations due to asthma-related illness or complications.

Sixteenth Street Community Health Centers: Sixteenth Street's Environmental Health Department recognizes that personal and community health are heavily influenced by the environmental conditions in which its client population lives. Through neighborhood revitalization, environmental health education, environmental

stewardship and its Community Schools partnerships, Sixteenth Street is working to transform Milwaukee's south side. They would assist us with education and community engagement.

Urban Ecology Center: The Urban Ecology Center's vision is to inspire generations to build environmental curiosity, understanding, and respect. They restore hope and heal our urban natural world, neighborhood by neighborhood. With 3 locations in Milwaukee, Urban Ecology Center's educational programs have reached many of the city's families and served kids in 60 urban Milwaukee schools each year. They would assist us with education and community engagement.

Environmental Law and Policy Center (ELPC): ELPC has long been concerned by air pollution and the related public health impacts in the Midwest. Air Quality Chicago is a project of the ELPC that aims to identify areas of Chicago with unhealthy air quality, educate and empower communities with data and advocate for solutions. ELPC has a wealth of knowledge to share from their experience in Chicago, the largest city in the Midwest (about 90 miles from Milwaukee). Their work aligns perfectly with our goals of monitoring air at the community level, collecting and compiling data, and providing education.

B. Community Engagement

Partnering with MPS for this project is ideal for us based on several unique ties they have to the community. First, United Way of Greater Milwaukee & Waukesha County partners with MPS to establish Community Schools throughout the district. The goal of the Community Schools program is to "transform schools into places where students, families, staff and the surrounding community can work together to ensure every student is successful. Community Schools place the focus on the whole child by providing academic supports, social and emotional learning, health and wellness, family and community engagement and a safe and supportive climate." ([[HYPERLINK "https://unitedwaygmwc.org/Education/Community-Schools"](https://unitedwaygmwc.org/Education/Community-Schools)]) In partnership with MPS, United Way works with these select schools along with ten local partner organizations to employ a Community School Coordinator at each school. The entire strategy of the Community Schools program promotes the following: stakeholder participation, building family leadership, building youth leadership, collaboration with school staff, focusing on local priorities, collective action and community engagement. Additionally, each MPS school has a Parent Coordinator who can help families by providing access to resources, opportunities to get involved at the school and support student achievement. This Parent Coordinator can also serve as a great connection between this project and the local community.

We have gained support for this project from state and local organizations that we have existing relationships with, through either ongoing communication or more formal partnerships. We have support from the Wisconsin Asthma Coalition (which includes approximately 200 members from a wide range of disciplines, including advocacy, education, epidemiology, primary care, specialty care, pharmacy, public health, school nursing, tobacco prevention, tribal communities and more) and local academia (e.g., Concordia University and Medical College of Wisconsin). Additionally, the Alliance's Asthma/Environmental Health initiative currently works with partners from various organizations in Milwaukee on the activities tied to the lead poisoning prevention project funding (see Section 6 A: Past Performance). These partners include representation from faith-based organizations, healthcare providers, environmentalists, local non-profits, philanthropy and local government. These preexisting partnerships will strengthen and benefit this project. For example, the Alliance has been working with the City of Milwaukee Health Department on the lead poisoning prevention project and has previously partnered with them on asthma work, so the health department was happy to agree to help support this application and share messaging regarding this air quality monitoring project. The Alliance prides itself on building and maintaining strong community partnerships to improve the health of Wisconsin's children.

Collected data may be made available to the public in several ways: through the platforms used by each brand of sensor, the Wisconsin Environmental Equity Tool map, Wisconsin Environmental Public Health Tracking portal and/or through a new platform we intend to develop. We aim to combine data from as many different sensors as possible to provide a comprehensive, hyper local map of air quality throughout Milwaukee. We plan to provide data updates to our partners, supporters, and any interested entities working on air quality initiatives in Milwaukee by inviting them to participate in a Milwaukee air monitoring group that holds regularly-scheduled meetings (either virtually or in-person). The group will collectively decide on a meeting cadence (e.g., monthly, bi-monthly or quarterly) and location.

Community-Based Organization Set-Aside Criteria

Since the founding of the Alliance in 1994, our mission has been to ensure Wisconsin children are healthy, safe

and able to thrive. The Alliance began with work to improve dental care for kids. Over the years, the Alliance proved itself as an effective coalition builder, policy influencer and program facilitator. As new issues and opportunities emerged, the state, private funders, academic institutions and community partners entrusted the Alliance with additional grants and programs. The Alliance now carries out our mission through six initiatives focusing on different aspects of children's health: Asthma/Environmental Health, Emergency Care, Grief and Bereavement, Injury Prevention and Death Review, Medical Home and Oral Health. Whether it's preventing injuries or improving access to care, the Alliance works to change systems, influence policy and implement best practices to help children grow to their full potential.

As Wisconsin's voice for children's health, we are an advocate for families and a catalyst for creating healthier communities. The Alliance is housed within Children's Wisconsin and guided by a volunteer advisory board that represents organizations statewide. The Alliance develops innovative child health initiatives in partnership with the Wisconsin Department of Health Services and implements programs proven to impact access and outcomes. Our work is guided by national and statewide priorities defined by the U.S. Department of Health and Human Services, the Wisconsin Department of Health Services and the Alliance Advisory Board.

The Alliance's asthma-focused work has demonstrated success in creating programs and resources to address the burden of asthma in Wisconsin and ensuring the community's voices are heard. By coordinating the Wisconsin Asthma Coalition, we engage partners who live and work in communities statewide in our work to empower people with asthma to live better and healthier lives. We help members of the community by providing resources to reduce the burden of asthma. We implement evidence-based asthma programs and advocate for the inclusion of asthma self-management education, home assessments and remediation in Medicaid financing. We have free walkthrough programs that can help reduce asthma triggers and create healthy school and child care environments in our communities. This helps ensure children with asthma are able to stay in school and learn. We also have a medication assistance program that helps that community find no-cost or reduced-cost medications for asthma management with our public listing of asthma-related coupons and prescription assistance information.

Section 3 – Environmental Justice and Underserved Communities

It's no accident that Milwaukee is one of the most segregated cities in the nation. Racist government policies and lending practices born a century ago sanctioned historic redlining that concentrated low income and people of color into less desirable areas of the city, leading to disproportionate health burdens due to pollution, poverty, substandard housing, disinvestment, and other social stressors. The legacy of racial inequity and concentrated poverty from redlining persists today with historically disenfranchised and marginalized Milwaukee communities still shouldering disproportionate exposure to pollution and associated health impacts. Milwaukee, population 577,222, is Wisconsin's most diverse city with 38.7% Black, 19% Hispanic, 4.3% Asian, 0.6% American Indian and 44.4% White residents. According to census data, the city of Milwaukee's poverty rate of 25.4% is more than double the national rate of 11.4%, and more than 40% of children live in poverty. Milwaukee County's overall social vulnerability rank is 0.806 (scale of 0 to 1, 1 being most vulnerable) based on 2018 data from the ATSDR Social Vulnerability Index.

Asthma disproportionately affects children living in poverty, which can play a major role in kids developing asthma and the ability to manage the disease. Poor housing conditions, proximity to transportation corridors and industry, lack of resources to pay for medication, and many more factors contribute to poor asthma outcomes in Milwaukee. Milwaukee's asthma rate is one and a half times the statewide rate at 15%, according to the *2020 Wisconsin Asthma Burden Report*. While the burden report showed no change in racial and ethnic disparities in asthma prevalence, hospitalization rates or mortality rates over the past decade, black people are still nearly three times more likely to die from asthma than white people, and other people of color are nearly twice as likely to die from asthma. The racial and ethnic disparities are attributed to social determinants of health that affect people of color to a larger extent than white people. These social determinants include poverty, limited access to affordable and healthy housing and food, limited access to comprehensive healthcare and asthma care, lack of asthma education, exposure to indoor and outdoor pollutants, stress and trauma, racism and discrimination, limited access to educational and economic opportunities, affordable transportation, and neighborhood conditions (safety, crime, access to green space, etc.). Milwaukee's communities of color have also experienced higher rates of COVID-19 hospitalizations and deaths since the pandemic began and lower rates of vaccinations, according to Milwaukee Health Department data.

Emissions from manufacturing, vehicles, trains, airplanes, port activities, and coal-fired power have combined to create significant cumulative health risks from elevated particulate and ozone pollution, according to EJ Screen data. Long-term exposure to air pollution has been connected to increased mortality rates from COVID-19 infection (Wu, 2020), creating added risks to vulnerable populations. Milwaukee County does not meet current federal air quality standards for ozone, and experiences 5 days above regulatory standards per year, based on a five-year average (2016-2020) from Wisconsin's Environmental Public Health Tracking (EPHT) portal. Additionally, the Wisconsin Initiative on Climate Change Impacts (2021) has forecasted increased days of high heat in Milwaukee, which will contribute to more frequent ozone exceedances and unhealthy air quality. Milwaukee County previously did not meet the federal 24-hour particulate pollution standard from 2009-2014. While Milwaukee's annual average ambient concentrations of PM2.5 meet current standards, several neighborhoods with a concentration of vulnerable residents are disproportionately exposed to higher concentrations of PM2.5, according to EPHT and EJ Screen data. Currently, there are proposals to reduce the PM2.5 standards, and future data gathered through the proposed grant work will be critical to understanding local conditions and health hazards, as well as identifying potential solutions if Milwaukee exceeds more protective proposed PM2.5 standards.

In order to reduce exposure to unhealthy air and improve asthma management in at-risk populations, the Alliance will work with local and state partners, including MPS, to create a community-based network of neighborhood-level air quality monitoring stations in areas of Milwaukee with elevated levels of PM2.5 pollution and high asthma burden (defined as disproportionately high rates of emergency department visits and hospitalizations) using EJScreen data and Wisconsin Asthma Program data respectively. As a result of this project, community members in overburdened neighborhoods and partners will have the knowledge and ability to monitor neighborhood and block-level air quality, access data in real time, and understand a range of actions they can take to keep themselves, their families, students, and neighbors safe and healthy when air is unsafe. This funding will help us further our mission by empowering at-risk people and those who are unjustly burdened by asthma to use data to take actions that safeguard their health and advocate for a range of air pollution mitigation and policy strategies, improving air quality for everyone. This funding opportunity would facilitate new and innovative ways to further reduce the burden of asthma in Milwaukee that we would otherwise not be able to pursue, helping us reach our goals to better understand neighborhood air quality, reduce asthma disparities, enhance quality of life, and prevent asthma-related deaths.

Community involvement will be a critical feature of our work with Milwaukee's underserved neighborhoods to ensure the communities are shaping the initiative to meet their needs and vision. Working through MPS Community Schools – a program to bring family and community members into schools to support students and participate in a variety of health and wellness services and programs – the community-based network of partners will continuously inform, involve, engage, and consult with stakeholders. The Alliance and partners will invite the participation of kids, parents, school staff, and neighbors in the design and implementation of the air monitoring program, ensuring meetings and materials are accessible, culturally relevant, translated in multiple languages, and tested with target audiences before being used. We will also recruit and train teachers and community members to monitor local air quality with kids, engaging them in hands-on learning to improve understanding of the connections between air quality and health. Stakeholder engagement and participation from the onset will continue to ensure they are part of the decision-making process and information dissemination. A robust evaluation effort will ensure the initiative is meeting the needs of community members, schools, and all stakeholders.

Section 4 – Environmental Results – Outcomes, Outputs and Performance Measures

A. Expected Project Outputs and Outcomes

The Breathe S.M.A.R.T program aims to develop a community-based network of neighborhood-level air quality monitoring stations. The objective is to mobilize and support Milwaukee neighborhoods to create locally-tailored tools to respond to asthma-related air quality risks. Due to the multi-prong approach at addressing air-quality through surveillance and community engagement, the six activities of the Breathe S.M.A.R.T program and their related outputs will effectively lead to the program objectives. The six activities work in cohesion to reach three long-term outcomes:

1. Identified and documented long-term air quality trends and their associated impacts

2. Reduced exposure to environmental asthma triggers in and around schools.
3. Reduced asthma-related hospitalization and emergency department visits in the targeted Milwaukee neighborhoods.

The identified outputs and outcomes, listed in the table below, were facilitated by an evaluator and developed in partnership with the program's stakeholders. The outputs and outcomes were examined with a critical lens to ensure feasibility, propriety and alignment with the mission and vision of the Breathe S.M.A.R.T program.

Outputs	Outcomes		
	Short-term	Intermediate	Long-term
Activity 1: 1. Deployment of equipment to conduct air quality monitoring 2. Near real-time air quality data (including concentrations, sources, locations and frequency) available for communities, schools, and other stakeholders.	1. Increased community and partner awareness of air sensor locations and where to find the data. 2. Increased access to air quality information.	Identified particulate matter trends and exposure risks based on variation in concentrations by season, time of day and location.	Identified and documented long-term air quality trends, exposure risks and their associated impacts.
Activity 2: 1. Improved partnerships and community involvement in analyzing sensor data 2. An established menu of air quality mitigation activities for schools.	Increased school and community knowledge of (1) how to mitigate risks, and (2) the relationships between air quality and health.	Schools partners develop a school-based action plan and implement mitigation strategies based on daily air quality.	Reduced exposure to environmental asthma triggers in and around schools
Activity 3: 1. Culturally relevant educational material tailored and informed by the community. 2. Improved partnerships with local communities. 3. An established menu of individual air quality mitigation activities for families 4. Increased understanding of community needs and challenges.	1. Increased access to data and community monitoring of air quality 2. Increased community knowledge of the relationship between air quality and health	Community action to mitigate certain air pollutants and reduce exposure.	Reduction of asthma-related ED visits and hospitalizations in targeted neighborhoods.
Activity 4: 1. Approximately 10 MPS partner schools will participate in the anti-idling campaign. 2. Each partner school will receive 3-4 anti-idling signage for school grounds	Increased community knowledge of the harmful impacts of idling.	Reduced idling on school grounds from community, school staff and parents.	Reduced exposure to environmental asthma triggers in and around schools.
Activity 5: 1. Established data protocols 2. Streamlined data updates with established timeframes	1. Increased identifications of major pollutants in targeted neighborhoods 2. Increased access to information on air quality trends	Increased use and knowledge of both the WI Tracking portal and Wisconsin Environmental Equity Tool.	Documented long-term air quality trends and associated health impacts, including cumulative health impacts.
Activity 6: 1. Established monitoring protocols 2. Completed progress report by EPA deadlines	Completed reports including PM's and partner input.	Identified behavior changes to report to the EPA	Identified environmental and policy changes to report to the EPA

B. Performance Measures and Plan

The Breathe S.M.A.R.T program will collect and analyze a variety of both qualitative and quantitative performance measures to ensure programmatic activities are implemented effectively and aligned with our intended outcomes. Our identified performance measures examine both the quality of services provided and the long-term impacts from program activities. Below is a description of the data to be collected or generated in the proposed project, based on the six activities.

Activity 1 PMs: Number of days above PM2.5 in a set timeframe; The number of community members who use air monitoring phone applications; The prevalence, observed source, and location of elevated particulate concentrations; The occurrence (time of day, day of the week, etc.) of elevated particulate concentrations; The number of volunteer air monitors trained

Activity 2 PMs: The number of school partners that implement an air quality action plan; Number of school and community trainings about sensor data and air quality completed

Activity 3 PMs: Number of social media engagements; Number of hosted community events and attendance; Collection of success stories from community members; Number of website hits and IP addresses after elevated air quality events; Number of zip codes served by the program; Percent of reduction in asthma related ED visits and hospitalizations in targeted neighborhoods

Activity 4 PMs: Percent of idling cars before vs. after the anti-idling campaign is implemented; Percent of improved Asthma Control Test scores and asthma-related nurse visits by schools

Activity 5 PMs: Number of data contracts; Number of website posts

The Breathe S.M.A.R.T program has three evaluation goals: 1) develop, implement and monitor a systematic Performance Management Plan; 2) measure the extent to which planned strategies and activities are implemented and lead to the intended short-term and intermediate outcomes; and 3) identify ways to improve the quality of our efforts and program to achieve the desired long-term outcomes. We will consult with program stakeholders, and school and community partners to guide our evaluation activities and develop a Performance Management Plan. This will include a coordinated monitoring protocol and creating a tracking database in Excel to monitor activities such as: deadline goals, annual progress and reporting timelines for each performance measure. Any findings from our evaluation efforts will be used to inform future program activities and shared with stakeholders.

C. Timeline and Milestones

Year 1: Procure air sensors and all associated supplies for sensor kits, hire and onboard a Project Manager, identify schools in high-priority neighborhoods (based on asthma burden map), begin developing educational materials for schools and community members, partner with 3-5 schools to host sensors (includes assessing where to place sensors, installation and training associated with the sensors), provide education about air quality monitoring to the schools and the community (including engagement activities using the sensors), collect community feedback regarding data (ease of access, usability, etc.), begin assessing public data-sharing options and/or tailoring a data portal

Year 2: Partner with 3-5 additional schools, continue providing education, collecting feedback and working on the data portal

Year 3: Partner with 3-5 additional schools, continue providing education and collecting feedback, finalize data portal, prepare final report

Activities that will span the 3 years: Prepare quarterly reports, hold/attend meetings with air quality partners in Milwaukee

Breathe S.M.A.R.T. Timeline

Activities	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Procure air sensors and supplies	X	X										
Hire and onboard a Project Manager	X	X	X	X								
Identify schools in high-priority neighborhoods	X	X										
Develop educational materials and communications pieces for schools and communities	X	X	X	X	X	X						
Partner with 3-5 schools to host sensors		X	X	X	X	X	X	X	X	X	X	X
Provide education about sensors and data to schools and communities			X	X	X	X	X	X	X	X	X	X

Collect community feedback regarding data access			X	X	X	X	X	X	X	X		
Begin work on the data platform that collects data and is available to the public; amend as needed based on feedback			X	X	X	X	X	X	X	X		
Finalize how/where data is collected, combined and available to the public									X	X	X	X
Hold/attend regularly scheduled meetings with air quality partners in Milwaukee	X	X	X	X	X	X	X	X	X	X	X	X
Prepare quarterly report; share with EPA/partners	X	X	X	X	X	X	X	X	X	X	X	X
Prepare final report; present to EPA/partners											X	X

Section 5 – Quality Assurance Statement: see attached QA Statement from Dr. Curtis Hedman

Section 6 – Programmatic Capability and Past Performance

A. Past Performance

The Alliance is currently a contractor on a federal grant from the Centers for Disease Control (CDC), *A Comprehensive Public Health Approach to Asthma Control Through Evidence-Based Interventions* (CDC-RFA-EH19-1902) awarded to the Wisconsin Department of Health Services (DHS). The Alliance successfully carries out the work plan by facilitating in-person and web-based trainings to complement the CDC's evidence-based E.X.H.A.L.E. strategies, leading the Wisconsin Asthma Coalition, implementing the Wisconsin Asthma Plan, and coordinating the School and Child Care Environmental Walkthrough Program.

The Alliance's Sudden Unexpected Infant Death (SUID) and Sudden Death in the Young (SDY) Case Registry funding was re-awarded by the CDC in 2018. The grant funds statewide surveillance of SUIDs in Wisconsin, as well as sudden deaths in children ages 0 to 19 who die from cardiac and neurological causes in four southeast Wisconsin counties. The Alliance utilizes a budget narrative and several supplemental reporting documents to capture the progress of the work under this 5-year grant.

The Alliance serves as a subcontractor on a 3-year funding award from Advancing a Healthier Wisconsin Endowment (AHW) titled "Clinical and Community Solutions to Lead-Free Children". Since this funding focused on lead poisoning prevention in Milwaukee was awarded in 2020, the Alliance has coordinated efforts related to policy and systems change, collaborated with the entire project team on resource development and collaborated with the project coordinator as needed.

Overall, in 2021 the Alliance successfully managed external grants totaling over \$1.6 million. These grants, including those above, spanned the Alliance's six initiatives. Funders (both federal and non-federal) included CDC, AHW, DHS, Wisconsin Department of Justice and more.

B. Reporting Requirements

CDC asthma grant: The Alliance collaborates with DHS to successfully produce monthly updates and annual progress reports (per funding requirements) that demonstrate how outcomes were achieved.

CDC SUID/SDY grant: Work plans and evaluation reports are submitted semi-annually in order to provide programmatic updates and document progress toward grant requirements. Also, there are bi-monthly technical assistance phone calls with contract administrators to discuss challenges, successes, and other support needs. To date, all reporting requirements have met all timeliness measures.

AHW lead poisoning prevention funding: The Alliance provides any needed input/documentation, including phone calls, meetings, and meeting notes to support progress reports to AHW that are required at 12-month intervals throughout the duration of the award, as well as a final report after the conclusion of the award.

C. Staff Expertise

An established infrastructure of key personnel currently exists at the Alliance that will be responsible for the grant project. Carissa Hoium, MPH is the Environmental Health Program Leader at the Alliance and will provide overall management of personnel listed for this project. In this role, Ms. Hoium builds community-based partnerships to improve asthma management, enhance quality of life, reduce disparities and prevent asthma-related deaths. Ms. Hoium has over 10 years of combined experience in public health and research. Ms. Hoium maintains constant communication with DHS to promote a comprehensive statewide asthma program in Wisconsin.

The Creative Services Program Leader and Communications Coordinator at the Alliance will also aid in the development of educational and communications materials tied to this project. The Creative Services Program Leader (Tara) has 19 years of experience working in communications at the Alliance. She has degrees in public health, adult education and graphic design allowing her to bring a unique lens to her work. She works with all the initiatives to maintain graphic and branding standards. The Communications Coordinator (Sage) has been working on events and engagement with Children's Wisconsin since 2015. She has a successful record of coordinating large events along with developing and managing event communication plans.

Section 7 – Budget

A. Budget Detail (narrative and table)

Personnel: \$252,343

This includes staff time for the following employees:

Staff position	Annual salary	% of time on project	Total cost over 3 years
Environmental Health Project Manager	\$60,000	125	\$231,818
Creative Services Program Leader	\$79,080	5	\$12,222
Communications Coordinator	\$53,720	5	\$8,303

Salaries include a 3% merit increase in Years 2 and 3. The Environmental Health Project Managers (1.25 FTE in total) will oversee and guide the efforts on all activities tied to this project. Responsibilities will include: coordinating the installation of the air sensors, coordinating trainings/educational programming/campaigns, assisting with the creation of project resources, conducting partner meetings, managing the budget, and drafting all progress reports and the final project report. The Creative Services Program Leader will aid in the development of professionally designed educational materials, policy template forms, template press releases and online resources. The Communications Coordinator will provide strategic direction on communications to promote the project and its activities to families, schools and communities.

Fringe benefits: \$91,274

Fringe benefits include short and long-term disability, health, dental, vision, tuition and 403-B match. The FICA rate is based on 7.65% of salary. The remaining benefits are based on a flat rate of \$17,770 per full time employee.

In-state travel: \$4,563

- Mileage: 50 miles/week x \$0.585/mile x 156 weeks = \$4,563

Supplies: \$36,820

PurpleAir PA-II-SD sensors (fixed): 30 x \$279 (minus 10% discount plus \$46 shipping) = \$7,579

AirBeam sensors (portable): 75 x \$249.00 (minus 5% discount; free shipping) = \$17,742

Total supplemental materials for the AirBeam sensors = \$7,232

- Android phones: 75 x \$90 = \$6,750
- AirBeam charger replacements (pack of 10) = \$15
- Carabiner clips (\$10.99/20 pk): 4 x \$11 = \$44
- Storage pouches: 75 x \$5 = \$375
- Label Maker = \$35
- Disinfectant wipes for cleaning between uses (80 count, pack of 4) = \$13

Office supplies including paper, folders, etc. = \$300

Program supplies (telephone, meeting expenses, Ipad, etc.) \$3,967.

Contractual: \$30,000

Data platform design/tailoring (competitive procurement): \$30,000

Other: \$85,000

Participant Support Costs (\$1,000/partner participant x 10; \$5,000/school x 15): \$85,000

Line Item & Itemized Cost	EPA Funding
Personnel - All Salaries include a 3% merit increase for Year 2 and Year 3.	
Project Manager @ \$60,000/year x 3 years x 1.25 FTE	\$231,818
Creative Services Program Leader @ .5 FTE x \$79,080	\$12,222
Communications Coordinator @ .5 FTE x \$53,720	\$8,303
TOTAL PERSONNEL	\$252,343
Fringe Benefits	
The FICA rate is based on 7.65% of salary. The remaining benefits are based on a flat rate of \$17,770 per full time employee.	\$91,274
TOTAL FRINGE BENEFITS	\$91,274
Travel	
Mileage for personnel: 50 miles/wk @ \$.585/mi x 156 wks	\$4,563
TOTAL TRAVEL	\$4,563
Supplies	
30 PurpleAir PA-II-SD fixed sensors	\$7,579
75 AirBeam portable sensors	\$17,742
75 Android phones	\$6,750
10 AirBeam charger replacements	\$15
Carabiner Clips	\$44
Pouches	\$375
Label Maker	\$35
Disinfecting Wipes	\$13
Office Supplies	\$300
Program Supplies (Telephone, Meeting Expenses, Ipad)	\$3,967
TOTAL SUPPLIES	\$36,820
Contractual	
Contract – Data platform design	\$30,000
TOTAL CONTRACTUAL	\$30,000
Other	
Participant Support Costs (\$1,000/partner participant x 10; \$5,000/school x 15)	\$85,000
TOTAL OTHER	\$85,000
TOTAL FUNDING	\$500,000
TOTAL PROJECT COST++	\$500,000

B. Reasonableness of Costs

The major costs listed for this project include personnel time (for all project activities), equipment including both fixed and portable sensors (for activities 1 and 4), stipends (for activities 1, 2 and 3) and data platform development/management (activities 5 and 6).

After careful consideration, we selected PurpleAir (PA-II-SD) for our fixed sensors and AirBeam as our portable sensors. The PA-II-SD device is an air quality sensor that measures real-time PM2.5 concentrations for residential, commercial, or industrial use. Built-in WiFi enables the air quality detector to transmit data to the PurpleAir map, where it is stored and made available to any smart device. For locations with limited or no WiFi access, the PA-II-SD PM2.5 measurement detector incorporates an SD card and real-time clock, allowing the sensor to record and store monitor data locally ([[HYPERLINK "https://www2.purpleair.com/collections/air-quality-sensors/products/purpleair-pa-ii-sd"](https://www2.purpleair.com/collections/air-quality-sensors/products/purpleair-pa-ii-sd)]).

AirBeam is a low-cost, palm-sized air quality instrument that measures hyperlocal concentrations of harmful microscopic particles in the air, known as particulate matter, as well as humidity and temperature. The AirBeam measures particulate matter with proven accuracy and when used in conjunction with the AirCasting platform - or a custom solution - helps community-based organizations, educators, academics, regulators, city managers, and community scientists map air pollution and organize for clean air ([[HYPERLINK "https://www.habitatmap.org/airbeam"](https://www.habitatmap.org/airbeam)]). We will assemble kits of all necessary supplies for the AirBeams before lending them out to schools and communities.

We will contract out the work to design and develop a data platform that collects, stores, prepares and presents air quality data in an efficient, user-friendly way. Our partners at ELPC have extensive experience as they have gone through this process in Chicago. The estimated timeframe is 3 months for the development phase, with additional time built in to refine the platform. We will use competitive procurement and will adhere to the Children's Hospital and Health System Administrative Policy and Procedure on Procurement.

Finally, we will provide a stipend/incentive to participants in this project. These participants may include the schools that will host the air sensors, Community School partner organizations, or partner organizations listed on this application. The stipends/incentives will remove barriers to participation related to costs of sensor installation and/or maintenance (including installation of an outdoor power supply for the fixed sensors), time spent receiving training on the sensors and data, and time spent providing education related to air quality.

C. Expenditure of Awarded Funds

The Alliance has an established track record of successfully implementing new programs, collaborating with a wide variety of partners and stakeholders, responsible fiscal discipline and administering grants and contracts from a wide variety of public and private agencies. Furthermore, the Alliance and other entities within Children's have successfully managed numerous multi-million dollar contracts and grant awards from federal and state agencies, corporations/ corporate foundations and private and community foundations. This includes successful financial management of the grants and contracts as well as measuring outcomes, reporting on impact and coordinating internal and external stakeholder involvement.

As a part of Children's Wisconsin, the Alliance's financial policies and procedures provide guidance to employees which include internal controls for the following: safeguard agency assets; provide for segregation of duties; assure proper approval of expenditures; provide protections from error, mismanagement and fraud; and maintain accurate financial records and reports for each agency program. Designated account numbers, costs centers and in some instances, grant codes are used to track revenue and expenses for each grant in both the general ledger and excel spreadsheets. Financial statements are prepared in accordance with Generally Accepted Accounting Principles and the State of Wisconsin Allowable Cost Policy. Financial reporting is done on a monthly basis in detail at the program level and in summary for the entire agency. Financial reporting includes detailed revenue and expense line items by program for the current month and year to date and comparisons of these actual results to budget. Financial Analysts work directly with the program leaders each month to discuss any programs that have a significant bottom line variance. A Treasurer's Report with the financial information, including balance sheet and cash flow and a narrative explaining variances is also prepared each month. Financial summary information is submitted to the board of directors each month, either through a full meeting or a meeting with the executive committee. The finance and audit committee reviews financial results in more detail quarterly.



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March 21, 2022

Carissa Hoium, MPH

Environmental Health Program Leader

Children's Health Alliance of Wisconsin

6737 W. Washington Street, Suite 1111

West Allis, WI 53214

Dear Ms. Hoium,

I am writing this letter to express the Urban Ecology Center's support of the work proposed by Children's Health Alliance of Wisconsin in the application for the U.S Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

Studies have found that U.S. minority populations are disproportionately exposed to air pollution regardless of income. Increased exposure to fine particle matter (PM_{2.5}) is linked to lung and heart disease such as asthma. Hyper-localized air monitoring in Milwaukee for particulate matter and the associated precursors will aid the Children's Health Alliance of Wisconsin and community organizations in understanding how air quality impacts minority populations. This will directly assist local community partners with identifying local air quality issues and mitigating the health risks associated.

This work aligns closely with the Urban Ecology Center's goals of connecting people in cities to nature and to each other by helping to identify barriers to access parks and other green spaces. The Children's Health Alliance of Wisconsin has a long history of raising awareness, mobilizing leaders, impacting public health and implementing programs proven to work and we believe they are uniquely qualified to provide data to improve Wisconsin at a community scale.

The Urban Ecology Center looks forward to supporting the proposed activities involved in this important work toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Sincerely,

Timothy Vargo

Manager of Research and Community Science

Erika Kluetmeier

Ex. 6 Personal Privacy (PP)

SKILLS

- Internal and external communications, marketing, public relations and brand strategy
- Writing, editing and design for print, digital, social media, and multimedia
- Media relations and crisis communication
- Science, health, and risk communication
- Sustainability and climate action
- Management and leadership
- Project management
- Health equity policy development
- Strategic planning
- Community engagement and organizing
- Neighborhood development

PROFESSIONAL WORK EXPERIENCE

Wisconsin Department of Health Services

Madison, Wisconsin

Environmental Health Communications Strategist

February 2020-present

- Manage communications strategy for Climate and Health Program, Asthma Program and cross-program initiatives.
- Develop comprehensive communications and campaign plans, and lead collaborative planning initiatives.
- Write, edit, and design content for news releases, digital and print marketing, digital and social media advertising, web, social media, e-newsletters, fact sheets, toolkits, displays, infographics, and blogs.
- Develop programs with local partners to improve quality of life, and address health inequities and disproportionate exposures to pollution, health hazards, climate change stressors, and other health and environmental hazards.

Wisconsin Department of Natural Resources

Madison, Wisconsin

Sustainability advisor

March 2018-February 2020

- Provided technical assistance on sustainable solutions and process improvements to businesses and local government through Green Tier, a voluntary sustainability program.
- Managed Enviro-Check, a voluntary continuous improvement program for businesses. Rebranded program, and developed marketing strategy and campaign plans to increase participation.
- Developed integrated strategic, communications and co-branding plans for DNR sustainability programs.
- Managed production of digital biennial legislative report with interactive features and video stories.

City of Fitchburg

Fitchburg, Wisconsin

Sustainable and Healthy Neighborhoods Coordinator

September 2014-March 2018

- Developed strategic plan with local stakeholders to create a healthy neighborhoods initiative to work with underserved neighborhoods to address health disparities, health care access, transportation barriers, workforce readiness, child/senior care access, affordable/quality house, food access and youth education.
- Led climate action and clean energy projects to reduce city's reliance on fossil fuels, cut costs and improve health.
- Provided recommendations to elected and appointed officials on integrating public health into all policies.
- Managed grant program to fund grassroots nonprofits serving Fitchburg's residents living in underserved areas.
- Developed partnerships with key stakeholders to develop a shared vision for improving health equity and building sustainable, thriving neighborhoods for all residents.
- Worked with partners to design and implement a voluntary anti-idling initiative at schools and businesses with large diesel fleets or drive-through operations to reduce emissions and exposure to harmful particulate matter.
- Served on Fitchburg's Healthy Neighborhoods Team, Dane County Climate Council and Public Outreach Workgroup, Green Tier Legacy Communities' Executive Committee; Enact Board, and chaired city's Green Team.

University of Wisconsin-Madison Extension, Environmental Resources Center

Madison, Wisconsin

Project Manager

October 2013 to September 2014

- Managed \$2.5 million project to increase the number of trained conservation advisors helping rural landowners, farmers and agency staff using sustainable agriculture practices and climate adaptation tools.

- Created protocols and processes to effectively initiate, organize and manage each project. Planned, scheduled and tracked project timelines, milestones, budgets, and deliverables.
- Coordinated workload and staffing for instructional design, marketing, and evaluation teams.
- Wrote grant proposals and reports, managed budgets and contracts, and ensured programs were accessible to all.

Communications Marketing Specialist

March 2012 to September 2014

- Developed marketing strategies and content for a climate change adaptation project in 12 states with eight partner universities, and a conservation training initiative in 20 states with four partner universities.
- Wrote content for news releases, digital and print, digital ads, e-newsletters, web, blogs and social media.
- Designed surveys and needs assessments for market research and evaluation purposes.
- Supervised marketing staff.

University Health Services – UW-Madison

Madison, Wisconsin

Student Services Coordinator

October 1999 to August 2003

- Supported 2,000 first-year UW students living off campus to address broad health issues that affect college students, including stress, social isolation, racial discrimination, binge drinking, and sexual assault.
- Designed and delivered student training programs to help student advisors create safe, inclusive, and supportive living-and-learning communities.
- Initiated collaboration with UW faculty and staff to develop residential learning, community service and leadership programs in off-campus residence halls.
- Developed a communication plan and promoted programs using print and digital communication tools. Coordinated with clinical staff to promote UHS services available at residence halls.

Wisconsin Department of Natural Resources

Madison, Wisconsin

Senior Public Affairs Manager

June 1996 to September 1999

Public Information Officer

November 1992 to May 1996

- Managed statewide public relations, media and public involvement strategy for two divisions within the agency.
- Counseled management teams on communications and public involvement needs, strategies and tactics.
- Designed communications and community engagement plans for internal and external audiences, and coordinated with multiple partners to implement and evaluate plans.
- Wrote content for news releases, feature stories, fact sheets, newsletters, brochures, speeches, video scripts, multimedia presentations and web. Designed for web and print.
- Planned all aspects of conferences and trainings from curriculum to logistics and evaluation.
- Created opportunities for public involvement and vision-setting for large-scale projects, including controversial contaminated sediment cleanup of the Lower Fox River and Green Bay.
- Developed communication policies and guidelines for agency branding and media relations.
- Created internal training programs on risk communication, public involvement, and media relations.
- Wrote federal grant proposals and managed budgets for public involvement components.
- Partnered with state and local government, community organizations, and faith communities to reduce health risks in underserved communities exposed to chemical contaminants, and unsafe drinking water and air pollution.
- Served on a planning team to reorganize agency's organizational structure.
- Managed hiring, training and performance of division communication team.

EDUCATION

University of Wisconsin-Madison

Madison, Wisconsin

Bachelor of Arts in Geography and History

1986 to 1990

- Concentrations in cultural geography and American environmental history
- Environmental Studies Certificate, Nelson Institute for Environmental Studies
- Staff reporter for *Badger Herald*, a student newspaper

Engagement: Wisconsin Women in Government, Behavior Energy & Climate Change, PRSA, ISSP

Volunteer: Regent Neighborhood Association board member, Fit City Madison, citizen stream monitor, youth environmental educator

Quality Assurance Statement

The work and deliverables proposed under this potential agreement will fall under a quality assurance system overseen by Dr. Curtis Hedman, Research Scientist-Toxicologist with the Wisconsin Department of Health Services Bureau of Environmental and Occupational Health. Dr. Hedman is the principal investigator and a human health risk assessor for the Agency for Toxic Substances and Disease Registry's (ATSDR's) Partnership to Promote Localized Efforts to Reduce Environmental Exposure (APPLETREE) program for the State of Wisconsin. In addition, Dr. Hedman also co-administers a statewide environmental assessment equipment loan program in partnership with the Wisconsin State Laboratory of Hygiene. Dr. Hedman has 25 years of experience in public health science and is responsible for all quality assurance (QA) and quality control (QC) aspects of the proposed project. This includes review and approval of the protocols and processes for determining acceptable data quality among project partners as well as the development of data quality objectives (DQOs) and the assurance of appropriate levels of precision, accuracy, representativeness, completeness, comparability of environmental data generated for the project.

Information from EPA's Air Sensor Toolbox will be consulted for best QA and QC practices. Plans for each environmental sampling event will be reviewed for completeness and inclusion of the appropriate DQOs, such as proposed study and background monitor locations, duplicate monitor locations, and the location of the reference monitor(s) to be used for the event. Operating procedures for the equipment used will be assessed to ensure appropriate preventative maintenance and calibration procedures are adhered to, including the following parameters:

- Calibrating with pollutant standards and flow meters, where appropriate.
- Cleaning internal and external surfaces and components to prevent the buildup of bugs, dust, etc.
- Replacing filters and consumables.
- Replacing the sensor when it has failed or reached its lifespan of service.
- Assessing battery life and changing when appropriate.
- Reviewing (visually inspecting) data for odd patterns, a decrease in overall response, drift in the baseline, and other unusual features. Instrument problems tend to produce data that often look too regular and repeatable, or that change too abruptly, to be due to natural atmospheric phenomena.

It should be noted that PurpleAir sensors have no calibration requirements for normal operation and cannot be challenged by standards in a meaningful way. Collocation studies and the evaluation of the agreement of the A and B channels are the only way to gauge the performance of these sensors. Collocation will be conducted at each sampling event. Review of A and B channel logged data will take place to observe if major channel disagreement has become pervasive indicating a sensor malfunction. Further analysis or investigation will take place if any issues are present.

TSI DustTrak instruments from the DHS/WSLH Equipment loan program that are calibrated to a primary standard will be used to verify field measurements made by Purple Air and Air Beam sensors. Upwind reference measurements will also be compared to the closest WI DNR PM_{2.5} area ambient air monitoring station for correlation.

Additional key quality control features for the proposed study follow:

- Precision, target <30%: co-located duplicate Purple Air monitors; co-located ELP DustTrak Monitor
- Accuracy, target <30%: co-located ELP DustTrak Monitor; upwind background data compared to data from DNR PM monitoring station.
- Data averaging time: Data are often averaged, or aggregated, to facilitate comparison to measurements from another instrument, health-based benchmarks, or environmental standards.
- Representativeness: Calibrations and certifications; DNR Purple Air factor application.
- Completeness, target $\geq 80\%$: The amount of data that was actually obtained, compared to the amount that was expected (for example, a sensor operating correctly and providing data for 4 days out of a 5 day monitoring test would have 80% data completeness)

The results from each sampling event will be reviewed for achievement of the designated DQOs and any data omissions or discrepancies, such as data logging errors. Any diversion from DQOs and their established limits will be addressed in a data limitations section of the results report.



WHO WE ARE

We are Wisconsin's voice for children's health. We raise awareness, mobilize leaders, impact public health and implement programs proven to work.

Key initiatives: asthma and environmental health, emergency care, grief and bereavement, injury prevention and death review, medical home, and oral health.

WHAT WE DO

Collaboration

We build and lead coalitions. We bring together diverse groups of people and organizations to make a difference.

Advocacy

We advocate for quality services and access for all children. Along with our partners, we work to reduce health disparities, raise awareness, influence policy and promote action on important issues.

Mobilization

We mobilize leaders and people around our key initiatives. We implement effective programs and policies and build capacity with our partners to drive change.

Support

We provide education, training and support for health professionals and families in our community. We ensure anyone working with families is equipped to help Wisconsin children.

MISSION

To ensure Wisconsin children are healthy, safe and able to thrive.

TAGLINE

Working for change from head to toe.

TARGET AUDIENCE

- State agencies
- Public health sector
- Health care community
- Community based organizations
- Academic/educational institutions
- Parents and caregivers
- Public and private foundations



Manifest for Grant Application # GRANT13579444

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 27763 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16022 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24107 bytes)

3. Form SF424A-V1.0.pdf (size 23043 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 22732 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 16002 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37163 bytes)

Attachments Included in Zip File (total 18):

1. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1250-Letter from WAC.pdf application/pdf (size 122190 bytes)

2. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1249-Letter from UEC.pdf application/pdf (size 539397 bytes)

3. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1235-Quality Assurance Statement.pdf application/pdf (size 431220 bytes)

4. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1248-Letter from SSCHC.pdf application/pdf (size 268226 bytes)

5. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1247-Letter from MPS.pdf application/pdf (size 72143 bytes)

6. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1246-Letter from MHD.pdf application/pdf (size 401704 bytes)

7. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1243-Letter from CW CHAMP.pdf application/pdf (size 565273 bytes)

8. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1242-Letter from Concordia.pdf application/pdf (size 605432 bytes)

9. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1241-Letter from DNR.pdf application/pdf (size 439152 bytes)

10. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1240-Letter from DHS.pdf application/pdf (size 757602 bytes)

11. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1245-Letter from MCW.pdf application/pdf (size 109945 bytes)

12. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1244-

Letter from ELPC.pdf application/pdf (size 148008 bytes)

13. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1251-Proof of Nonprofit Status.pdf application/pdf (size 59266 bytes)

14. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1234-Breathe S M A R T Project Narrative Final 3.23.2022.docx application/vnd.openxmlformats-officedocument.wordprocessingml.document (size 55808 bytes)

15. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1239-Dr. Curtis Hedman CV.pdf application/pdf (size 348413 bytes)

16. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1238-Erika Kluetmeier resume.pdf application/pdf (size 233403 bytes)

17. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-Carissa Hoium resume.pdf application/pdf (size 662971 bytes)

18. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1236-Community-Based Organization Documentation.pdf application/pdf (size 639757 bytes)

March 10, 2022

Carissa Hoium, MPH
Environmental Health Program Leader
Children's Health Alliance of Wisconsin
6737 W. Washington Street, Suite 1111
West Allis, WI 53214

Dear Ms. Hoium,

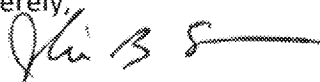
I am writing this letter to express Sixteenth Street Community Health Centers' support of the work proposed by Children's Health Alliance of Wisconsin in the application for the U.S. Environmental Protection Agency's *Enhanced Air Quality Monitoring for Communities* grant.

Studies have found that U.S. minority populations are disproportionality exposed to air pollution regardless of income. Increased exposure to fine particle matter (PM_{2.5}) is linked to lung and heart disease such as asthma. Hyper-localized air monitoring in Milwaukee for particulate matter and the associated precursors will aid the Children's Health Alliance, Milwaukee Public Schools and community organizations in understanding how air quality impacts vulnerable populations. This will directly assist local community partners with continuing to change and update zoning, housing and school directives.

The Sixteenth Street Community Health Centers has cared for residents of the south side of Milwaukee and Waukesha for over 50 years. Our mission is to improve the health and wellbeing of Milwaukee and surrounding communities by providing quality, patient-centered, family-based health care. Our care for clients and their families is linked to a deep understanding of social and environmental determinants of health and the years of development of programming to addresses these factors, both inside and beyond our clinic walls, including the local environment.

Sixteenth Street Community Health Centers looks forward to supporting the proposed activities involved in this important work toward reducing health disparities and creating a healthy environment for all children and families of Milwaukee.

Sincerely,



Julie B. Schuller, MD, MPH, MBA
President and CEO
Sixteenth Street Community Health Centers
1032 S. Cesar Chavez Drive
Milwaukee, WI 53204
414-897-5192



Curtis J. Hedman, Ph.D.

1 W. Wilson St., Rm. 150
Madison, WI 53701

Phone: (608) 266-6677

Email: curtis.hedman@dhs.wisconsin.gov

Professional Preparation

- BS, 1992, University of Wisconsin-Oshkosh, Major - Microbiology, Minor - Chemistry;
- MS, 2006, University of Wisconsin-Madison, Major - Environmental Chemistry and Technology;
- PhD, 2012, University of Wisconsin-Madison, Major - Environmental Chemistry and Technology, Minor - Molecular and Environmental Toxicology.

Appointments

- October 2017 to present: Research Scientist-Toxicologist, Wisconsin Department of Health Services (DHS), Division of Public Health, Bureau of Environmental and Occupational Health, Madison, WI. Principal Investigator (PI) and human health risk assessment activities for the Agency for Toxic Substances and Disease Registry's (ATSDR's) Program to Promote Local Efforts to Reduce Environmental Exposure (APPLETREE), co-administration of the WI DHS/WSLH environmental assessment equipment loan program, chemical exposure monitoring and environmental site assessments, administration of WI DHS PPE and respirator fit testing programs, CDL qualified driver of DHS Forward Operations Center (FOC) vehicle for radiation safety response activities, and duty officer for the DHS Chemical and Natural Disaster On-call Team.
- October 2015 to present: Affiliated Faculty, Department of Population Health Sciences, School of Medicine and Public Health, UW-Madison, Madison, WI. Coordination of collaborative research projects. Guest lecturer on toxicology of organic solvents for UW-Madison Course MET 625.
- December 2013 to present: Adjunct Faculty of Occupational and Environmental Health, Joseph J. Zilber School of Public Health, UW-Milwaukee, Milwaukee, WI. Coordination of collaborative research projects and guest lecturer activities for applicable UW-Milwaukee courses. Preceptorship for MPH field experience projects.
- December 2005 to October 2017: Assistant Scientist, Environmental Health Division (EHD), Organic Chemistry Department, Wisconsin State Laboratory of Hygiene, Madison, Wisconsin. Analysis of organic compounds (pesticides, PPCPs, PCBs, PAHs, PFCs, plasticizers, hormones, natural and synthetic toxins) in environmental and physiological matrices by HPLC-MS/MS, oversight and mentorship of visiting undergraduate and graduate student researchers, principal investigator (PI) activities and coordination of collaborative research projects. Guest lecturer on gas chromatography, liquid chromatography and mass spectrometry for UW-Madison Course CEE 501, Water Analysis – Intermediate.
- June 2011 to June 2013: Assistant Researcher, Wisconsin National Primate Research Center/Wisconsin Institute for Clinical and Translational Research/Wisconsin Institutes for Medical Research (WI NPRC/ICTR/WIMR), Madison, Wisconsin. Analysis of vitamin D metabolites and hormones in human and non-human primate matrices by HPLC-MS/MS instrumentation, and coordination of collaborative research projects.
- October 2001 to December 2005: Microbiologist-Senior, EHD Mycology/Bioaerosols Unit, Wisconsin State Laboratory of Hygiene (WSLH), Madison, Wisconsin. Isolation, identification, and quantification of fungi and bacteria from environmental samples and clinical specimens. QA Officer for the Environmental Microbiology program as accredited through the American Industrial Hygiene Association. Guest Lecturer on Bioaerosols for UW-Madison Medical Technology Program.
- June 1998 to October 2001: Chemist, Inorganic Chemistry Department, Wisconsin Occupational Health Laboratory (WOHL), Madison, Wisconsin. Quantification of metals and metal compounds in industrial hygiene and environmental matrices employing ICP-AES, GFAA, Flame AA, and FIMS instrumentation. Focus on lead, mercury, beryllium, and elemental screen by NIOSH 7303.
- September 1997 to May 1998: Research Assistant, Food and Drug Analysis Department, Covance Laboratories, Madison, Wisconsin. GLP Quantification of various analytes in food, drug, physiological, and environmental matrices employing HPLC, GC, spectrophotometric, and microbiological technologies.

- March 1996 to September 1997: Research Assistant, Mass Spectrometry Group, Covance Laboratories, Madison, Wisconsin. GLP Quantification of pharmaceutical compounds in physiological matrices employing HPLC-MS/MS and Capillary Electrophoresis (CE) techniques.
- January 1993 to March 1996: Research Assistant, Bioanalytical Chemistry Group, Hazleton Laboratories, Madison Wisconsin. GLP Quantification of pharmaceutical compounds in physiological matrices by HPLC using ultraviolet, fluorescence, and electrochemical detection and antibiotic quantification and environmental analysis using microbiological methods.
- June 1991 to December 1992: Analyst/Research Assistant, Microbiological Vitamin Group/Nutritional Chemistry Department, Hazleton Laboratories, Madison Wisconsin. GLP Quantification of water-soluble vitamins.
- March 1991 to May 1991: Laboratory Assistant, Muinde Laboratories, Oshkosh, Wisconsin. Analysis of domestic and industrial waste water.
- September 1989 to March 1991: Laboratory Assistant, Electron Microscopy Laboratory, University of Wisconsin-Oshkosh. Operation and maintenance of electron microscopes.
- May 1990 to October 1990: Seasonal Laboratory Technician, Pillsbury-Green Giant Company, Ripon, Wisconsin. Performance of wet chemistry, NIR spectroscopy, and product quality control (QC) assays.

Professional Memberships

- WI Department of Health Services Occupational Surveillance Advisory Group
- WI Department of Natural Resources Air Management Study Group
- American Industrial Hygiene Association (AIHA) –WI Section
- Society for Environmental Toxicology and Chemistry (SETAC) – Midwest Section

Synergistic Activities

- 2021. Review board member for the International Journal of Environmental Research and Public Health.
- 2019. Invited expert speaker on synthetic opioids safety for the Wisconsin Association of Hazardous Materials Responders (WAHMR) Conference.
- 2018. Invited expert speaker for Marquette University Emerging Contaminants in Water and Wastewater Short Course.
- 2000 to 2017. Wisconsin State Laboratory of Hygiene Health and Safety Committee. Performed laboratory safety audits and review for monthly accident reports.
- 2015 to 2017. Application reviewer for American Industrial Hygiene Association (AIHA) Laboratory Accreditation Committee
- 2015. Invited expert speaker for AB SCIEX VIP Metabolomics Seminar.
- 2014. Recipient of AB SCIEX Young Investigator Program Award.
- 2012. Invited expert speaker for WI Institute for Clinical and Translational Research (ICTR) Research Learning Series Seminar.
- 2012. Invited expert presenter for AB/SCIEX. 60th American Society for Mass Spectrometry Conference and Allied Topics.
- 2011. Invited expert presenter. Gilson WEB Event. Sample Preparation for Methods for the Analysis of Contaminants in Water and Soil - the Role of Solid Phase Extraction (SPE).
- 2009. Invited expert panel participant. PITTCON Networking Session - Sample preparation: the do's and don'ts to determine the correct approach and optimization of a method. 60th PITTCON Conference and Exposition, Chicago, IL.
- Peer Review activities for US EPA, *Environmental Science and Technology*, *Environmental Research* and *Journal of Environmental Quality*.

CARISSA L. HOIUM

EMPLOYMENT

Environmental Health

Program Leader **Children's Health Alliance of Wisconsin** **Sept. 2021 – present**

- Leads assigned program activities related to the statewide asthma program work plan.
- Coordinates the Wisconsin Asthma Coalition, school and child care walkthrough program, school-based asthma management program and medication assistance website.
- Implements and fulfills the lead poisoning prevention work plan activities associated with grant funding, including policy-related activities, education and community engagement.
- Creates and sustains partnerships to improve health outcomes for people with asthma and lead poisoning risks.

Injury Prevention Coordinator **Children's Wisconsin** **Aug. 2016 – Sept. 2021**

- Managed and coordinated work plans, contracts and budgets for the statewide teen driving program.
- Collaborated with statewide organizations to support the teen driving initiatives in Wisconsin.
- Implemented and coordinated ongoing motor vehicle safety projects and educational resources.
- Installed car seats and provided education as a certified Child Passenger Safety Technician.

Program Coordinator **Medical College of Wisconsin** **Feb. 2010 – Aug. 2014**

- Reviewed experimental protocols and grants for accuracy and compliance.
- Provided customer service to faculty and staff.
- Maintained spreadsheets and updated documentation based on current research regulations.
- Gave informational presentations to faculty and staff on behalf of the Office of Research.

EDUCATION

Milwaukee, WI **Medical College of Wisconsin** **2012 – 2015**

- Master of Public Health
- Graduate Coursework: Public Health Administration, Community Health Assessment and Improvement, Community Health Planning, Community Health Program Evaluation, Environmental Health, Epidemiology, Public Health Policy, Ethical Issues in Public Health.

Sioux Center, IA **Dordt College** **1998 – 2002**

- Bachelor of Arts degree, Major: Biology with Chemistry Cognate

PROFESSIONAL MEMBERSHIPS

Wisconsin Public Health Association